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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,174	11/11/2003	Michael Donovan Mitchell	8681RCR2	4650

27752 7590 10/08/2008

THE PROCTER & GAMBLE COMPANY
Global Legal Department - IP
Sycamore Building - 4th Floor
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EXAMINER	
KIM, SUN U	

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
10/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/705,174	MITCHELL ET AL.	
	Examiner	Art Unit	
	JOHN KIM	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8,9,12,13,15 and 17-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8,9,12,13,15 and 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-3, 5-6, 8-9 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon et al (US Pat. No. 6,881,348) in view of Derbyshire et al (US Patent No. 6,057,262) and Hill (US Patent No. 1,782,850).

Regarding claim 1, Cannon et al teach a column i.e. housing having an inlet and an outlet and a filter material disposed in the column comprising a plurality of mesoporous activated carbon particles loaded with an cationic polymer (see col. 2, lines 41-54; col. 9, lines 17-41; Table 2: Ultracarb bituminous or lignite granular activated carbon (GAC) (mesoporous) loaded with PDADMAC (polydiallydimethylammonium chloride)) for removing perchlorate or other anionic contaminate from ground water. However, Cannon et al do not teach mesoporous wood activated carbon filter particles for bacteria and virus removal. Derbyshire et al teach mesoporous granular activated carbon particles made from wood, nut shell, fruit pit and stone,

peat, lignite and subbituminous coal (see abstract; col. 1, lines 28-46; col. 2, line 39 – col. 3, line 7; col. 4, lines 21-56) wherein mesoporous carbon is used for adsorption of large molecules taking advantage of relatively high pore surface area for increased adsorption activity (see col. 4, lines 48-55). Hill teaches that bacteria are removed from water by activated carbon (see col. 1, lines 36-58). Simple substitution of mesoporous wood activated carbon filter particles for mesoporous bituminous or lignite GAC particles would achieve predictable result of removing large molecules by virtue of equivalent mesoporous carbon having relatively high pore surface area as disclosed in Derbyshire et al as well as providing a capability to remove bacteria from water as taught by Hill. Mesoporous wood activated carbon particles of Derbyshire et al in a column has inherent capabilities of claimed F-BLR and F-VLR by its sheer mesoporosity of activated carbon. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Characterization of mesorporous carbon by claimed sum of the mesopore and macropore volumes of the filter particles and the claimed ratio of the sum of the mesopore and macropore volumes of the filter particles to the total pore volume of the filter particles are inherent in the mesoporous carbon of Cannon et al or Derbyshire et al by its mesoporosity absent persuasive evidence.

Regarding claims 2-3 and 17, Cannon et al teach a cationic polymer including polydiallydimethylammonium chloride (see col. 2, lines 58-60).

Regarding claim 5, Cannon et al teach that mesoporous granular activated carbon has mesopore volume of 0.3 mL/g (see Table 1, 2; col. 10, lines 45-58). Overlapping or lie inside range disclosed by the prior art establishes a prima facie case of obviousness. See MPEP 2144.05, I. Furthermore, Derbyshire et al teach that mesoporous wood activated carbon particles

has the sum of the mesopore and the macropore volumes between about 0.2 mL/g and about 2 mL/g (see examples 11, 15-16).

Regarding claims 6 and 18, the mesoporous wood activated carbon particles of Derbyshire et al is substantially identical to the filter material claimed; therefore the mesoporous wood activated carbon particles of Derbyshire et al has inherent capabilities of claimed BRI and VRI. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claims 8-9 and 19, the filter material from the mesoporous wood activated carbon particles of Derbyshire et al is substantially identical to the filter material claimed; therefore, the filter material of Derbyshire et al has inherent properties of claimed single collector efficiency, filter coefficient, point of zero charge and ORP. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claim 20, the claimed pore volume for pore diameters between about 4 nm and about 6 nm is inherent in mesoporous carbon of Cannon et al or Derbyshire et al absent persuasive evidence. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

3. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon et al in view of Derbyshire et al and Hill as applied to claim 1 above, and further in view of Koslow (US Patent No. 6,630,016).

Regarding claim 4, Cannon et al in view of Derbyshire et al and Hill teach the filter as described in above paragraph. Claim 4 essentially differs from the filter of Cannon et al in view of Derbyshire et al and Hill in reciting a silver coating on the mesoporous activated carbon particles coated with a cationic polymer. Koslow teaches a filter comprising a silver, effective biocide, coated or precipitated onto the filter particles coated with cationic polymers (see col. 5,

line 65 – col. 8, line 6). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate silver onto the cationic polymer coated mesoporous activated carbon particles of Cannon et al in view of Derbyshire et al and Hill for effective biocide under conditions of high ionic strength as suggested by Koslow (see col. 7, lines 53-64).

Regarding claim 14, Cannon et al teach cationic polymer including PDADMAC (polydiallydimethylammonium chloride) (see col. 2, line 58 – col. 3, line 11; Table 2; col. 9, lines 20-21).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon et al in view of Derbyshire et al and Hill as applied to Claim 1, and further in view of Jagtoyen et al '906 (US 2004/0040906 A1). Cannon et al in view of Derbyshire et al and Hill teaches the filter as described in above paragraph. Claim 12 essentially differs from the filter of Cannon et al in view of Derbyshire et al and Hill in reciting a package comprising information that the filter or filter material provides. Jagtoyen et al '906 teach a package for containing the filter and wherein the package comprises information that the filter or filter material provides removal of pathogens, particularly viruses (see paragraph 281-283). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to pack the filter of Cannon et al in view of Derbyshire et al and Hill in the package of Jagtoyen et al '906 to form a kit that informs the user about the benefits and importance of using the filter as suggested by Jagtoyen et al '906 (Par. 283).

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon et al in view of Hill and Koslow.

Regarding claim 15, Cannon et al teach a column i.e. housing having an inlet and an outlet and a filter material disposed in the column comprising a plurality of mesoporous activated carbon particles coated with an cationic polymer (see col. 2, lines 41-54; col. 9, lines 17-41; Table 2: Ultracarb bituminous or lignite granular activated carbon (GAC) (mesoporous) loaded with PDADMAC (polydiallydimethylammonium chloride)). Claim 15 essentially differs from the filter of Cannon et al in reciting a binder binding the plurality of mesoporous activated carbon particles and the capability of activated carbon particles for bacteria and virus removal. Koslow teaches the use of binders to bind a plurality of activated carbon and extruded to form an activated carbon block filter having F-BLR of greater than about 2 logs and a F-VLR of greater than about 1 log (see col. 11, line 45 –col. 13, line 43; Tables I and II). Hill teaches that bacteria are removed from water by activated carbon (see col. 1, lines 36-58). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the filter of Cannon et al to bind a plurality of mesoporous activated carbon particles to form a mesoporous filter media of activated carbon block filters of various sizes as suggested by Koslow (see col. 11, line 45 – col. 12, line 2).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon et al in view of Hill and Koslow as applied to Claim 15, and further in view of Jagtoyen et al '906 (US 2004/0040906 A1). Cannon et al in view of Hill and Koslow teaches the filter as described in above paragraph. Claim 13 essentially differs from the filter of Cannon et al in view of Hill and Koslow in reciting a package comprising information that the filter or filter material provides. Jagtoyen et al '906 teach a package for containing the filter and wherein the package comprises information that the filter or filter material provides removal of pathogens, particularly viruses

(see paragraph 281-283). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to pack the filter of Cannon et al in view of Hill and Koslow in the package of Jagtoyen et al '906 to form a kit that informs the user about the benefits and importance of using the filter as suggested by Jagtoyen et al '906 (Par. 283).

7. Applicant's arguments filed 7/8/08 have been fully considered but they are not persuasive. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Hill is applied to demonstrate that activated carbon is used for bacterial and virus removal. Mesoporous activated carbon of Cannon et al is reasonably expected to remove bacteria and virus by its sheer property of being activated carbon.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN KIM whose telephone number is (571)272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Kim/
Primary Examiner, Art Unit 1797

JK
10/3/08